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THE UNIVERSITY OF NEW HAMPSHIRE
AGRICULTURAL EXPERIMENT STATION

Department of Biochemistry

# Inspection of Commercial Fertilizers

Made for the

STATE DEPARTMENT OF AGRICULTURE

H. A. Davis and Dorothy F. Oresteen

THE UNIVERSITY OF NEW HAMPSHIRE
DURHAM, N. H.

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This bulletin reports the analysis of 169 official samples of commercial fertilizers and fertilizer materials submitted for analysis during the year ending June 30, 1959.

The inspection of commercial fertilizers was made under the direction of the Honorable Perley I. Fitts, Commissioner of Agriculture. The samples were collected by Mr. George H. Laramie, Fertilizer Control Supervisor.

All questions relating to the New Hampshire Fertilizer Law and the registration of fertilizers or fertilizer materials prior to sale in the state, should be directed to the attention of the Fertilizer Control Supervisor, State House, Concord, New Hampshire. This laboratory is responsible for the analysis only of official samples as submitted.

The general character of the fertilizer and fertilizer materials sampled is shown by the following classification.

| | |
|---|---|
| Complete fertilizer (Of these, 31 also carried a total Magnesium Oxide guarantee and 19 specified water-soluble Magnesium Oxide and 3 carried a boron guarantee.) | 110 |
| Phosphoric acid and potash (Of these, 4 carried a boron guarantee in addition) | 17 |
| Nitrogen | 2 |
| Nitrogen and phosphoric acid | 6 |
| Superphosphate | 8 |
| Ammonium Nitrate | 3 |
| Urea | 2 |
| Ground Bone | 4 |
| Manure | 12 |
| Sodium Nitrate | 2 |
| Muriate of Potash | 1 |
| Agrinite | 1 |
| Cottonseed meal | 1 |

## THE FERTILIZER LAW

The New Hampshire Fertilizer Law has been revised by legislative action. The revised law is effective January 1, 1960. All persons concerned with the manufacture, distribution or use of commercial fertilizers should note these changes. Four points of significant change are: 1. The registration fee is now ten ($10.00) dollars per element claimed. 2. Special mixes may be allowed by obtaining permission from the Commissioner of Agriculture. 3. Several words in the old law were changed so that now there is more consistent word usage and meaning in the law as written. 4. Registration "under protest" is provided for under specific conditions. A booklet titled "New Hampshire Fertilizer Law and Rules and Regulations" which spells out these matters in detail may be obtained by writing to the State Department of Agriculture, State House, Concord, New Hampshire.

Quotation from the law concerning registration, guarantee and labeling of commercial fertilizers in New Hampshire follows:

"Section 439:4 REGISTRATION. (a) Each brand and grade of commercial fertilizer shall be registered before being offered for sale, sold or distributed in this state, except mixed fertilizers or fertilizer materials used for research or experimental purposes so determined by the commissioner. The application for registration shall be submitted to the commissioner on forms furnished by the commissioner and shall be accompanied by a label or true copy of said label upon request of the commissioner, in addition to a registration fee, per grade, as follows: ten dollars for the nitrogen; ten dollars for the phosphoric acid; ten dollars for the potash; ten dollars for the magnesium oxide or magnesium; ten dollars for the boron or borax; and ten dollars for each other plant food elements claimed to be in the said brand or grade of fertilizer. All registrations expire on or before January 1, annually. The application shall include the following information in the following order: (1) The name and address of the person guaranteeing the fertilizer. (2) The brand and grade. (3) The guaranteed analysis showing the minimum percentage of plant food claimed in the following order and form: Total nitrogen...per cent; available phosphoric acid...per cent; soluble potash...per cent. Unacidulated mineral phosphatic materials and basic slag shall be guaranteed as to both total and available phosphoric acid, and the degree of fineness. In the case of bone, tankage, and other natural organic phosphate materials, only the total phosphoric acid need be guaranteed. Additional plant food elements, determinable by chemical methods, may be guaranteed only by permission of the commissioner by and with the advice of the director of the agricultural experiment station. When any such additional plant foods are claimed, they shall be included in the guarantee, and shall be subject to inspection and analysis in accordance with the methods and regulations that may be prescribed by the commissioner. (1959, 39:2)

(b) A distributor shall not be required to register any brand of commercial fertilizer which is already registered hereunder by another person.

(c) The plant food content of each and every brand of commercial fertilizer must remain uniform for the period of registration."

"Section 439:5 LABELING. (a) Any commercial fertilizer offered for sale or sold or distributed in this state in bags, barrels, or other containers shall have placed on or affixed to the container in written or printed form the net weight and the information required. (1), (2), and (3) of paragraph (a) of section 4 either (1) on tags affixed to the end of the package between the ears and/or on the sewed end or (2) directly on the package. (b) If distributed in bulk, a written or printed statement of the weight and the information required by (1), (2) and (3) of paragraph (a) of section 4, shall accompany delivery and be supplied to the purchaser."

Penalty provisions - The Law provides for the levying of a penalty amounting to three times the commercial value of the constituent found deficient when deficiencies exceeding allowed tolerances are found. The following table of tolerances as adopted by the State Department of Agriculture is quoted from the Rules and Regulations of that Department.

| Total Nitrogen | | Available Phosphoric Acid | | Soluble Potash | |
|---|---|---|---|---|---|
| Guarantee | Deficiency | Guarantee | Deficiency | Guarantee | Deficiency |
| 2% | 0.20 | 0-10% inc. | 0.40 | 2% | 0.20 |
| 3% | 0.25 | 10-25% inc. | 0.50 | 3% | 0.30 |
| 4% | 0.35 | Over 25% | 0.75 | 4% | 0.40 |
| 5-8% inc. | 0.40 | | | 4-8% inc. | 0.50 |
| 8-30% inc. | 0.50 | | | 8-20% inc. | 0.60 |
| Over 30% | 0.75 | | | Over 20% | 1.00 |

The chief purpose of the official inspection of fertilizers is to protect the consumer against misbranded products that probably would soon appear on the market if the sale of fertilizer was not under state regulation. If the consumer accepts fertilizer not labeled in compliance with the law, he does so at his own risk. He should acquaint himself with the requirements of the law concerning labeling and be familiar with the terms and symbols used on the label.

A commercial fertilizer generally supplies one or more of three elements: nitrogen, phosphorus and potassium; which are commonly required in relatively large amounts for plant growth. The percentage of each of these three materials is represented by numerals in designating the grade of a fertilizer. These percentages are presently expressed in terms of nitrogen, phosphorus pentoxide and potash and the symbols used are N, $P_2O_5$ and $K_2O$ respectively. The term phosphoric acid is commonly used when referring to the phosphorus content.

Under certain conditions, other elements such as magnesium, boron and other so-called minor elements are needed to correct soil deficiencies in certain localities. These may be included in the mixed fertilizer.

Much advertising of fertilizer materials packed in small packages is directed to the attention of the home gardener and growers of house plants. This small package serves a definite need, however the "miracle" results claimed may not always be obtained. In general, it is more economical for the gardener to purchase fertilizer of a reliable brand and in reasonably large packages.

All control officials charged with the enforcement of state laws regulating the sale of commercial fertilizers and fertilizer materials are joined in the Association of American Fertilizer Control Officials. Research workers employed by State or Federal Agencies engaged in the investigation of fertilizers are also members of this Association. The object of this organization is "to promote uniform and effective legislation, definitions, rulings, and enforcement of laws relating to the control of sale and distribution of mixed fertilizers and fertilizer materials in the Continent of North America." At the annual meetings of the Association, reports and recommendations of investigators concerning definitions of fertilizer materials, use of new products, and problems concerning regulation of the fertilizer trade are discussed in detail. Fertilizer manufacturers are invited to participate in these discussions; and through mutual cooperation, the farmer is supplied with a product that can be relied upon to do the job expected in crop production. The official publication of the Association may be obtained for a small fee through the office of its secretary, B. D. Cloaninger, Clemson, South Carolina. This booklet contains the official terms describing fertilizer materials, a proposed model state fertilizer law, as well as the proceedings of the annual meeting.

Whether or not a fertilizer contains the guaranteed amount of plant food can be determined only by a chemical analysis. For this reason, it is considered necessary that each brand of fertilizer offered for sale be officially sampled and analyzed each year. When failure to meet the guarantee is proved by chemical analysis, the prosecution or seizure provisions of the law may be invoked. The purchaser's refusal to buy a fertilizer which does not conform to the law will not only assist in the enforcement of the law, but will at the same time insure him the protection of the law.

In addition to the above provision is made for tolerance to be set and a penalty schedule drawn up for any guarantee claimed after evaluation of the situation by the Commissioner and proper notice given by his office.

## USE OF COMMERCIAL FERTILIZERS

It is not within the scope of this department to make recommendations regarding the use of commercial fertilizers. The Department of Agronomy and the Department of Biochemistry of the University of New Hampshire Agricultural Experiment Station test soils and conduct experimental work with various fertilizer materials on hay and crop land. The Department of Horticulture investigates fertilizer treatments for fruits and vegetables. Much of this work has been published, and is available for free distribution to residents of New Hampshire. Address your request to Mail Service, University of New Hampshire, Durham, New Hampshire. A list of currently available publications on fertilization follows:

| | | |
|---|---|---|
| Ext. Bull. | 100 | Growing Apples in New Hampshire. |
| Ext. Bull. | 104 | Growing Vegetables at Home. |
| Ext. Bull. | 105 | Asparagus in New Hampshire. |
| Ext. Bull. | 118 | Growing Potatoes in New Hampshire. |
| Ext. Bull. | 125 | Growing Strawberries in New Hampshire. |
| Ext. Bull. | 129 | Forage Crop Production in New Hampshire. |
| Ext. Bull. | 144 | Growing Peaches in New Hampshire. |
| Ext. Cir. | 275 | Culture of Low-Bush Blueberries. |
| Ext. Cir. | 309 | Growing Grapes in New Hampshire. |
| Ext. Cir. | 310 | Cane Fruit Culture. |
| Ext. Cir. | 314 | Tomatoes for New Hampshire. |
| Sta. Bull. | 424 | Soils and Their Crop Adaptation in New Hampshire. |
| Sta. Bull. | 439 | Forage Variety Trials in New Hampshire 1951-1956. |
| Folder | | New Hampshire Recommendations for Seed, Fertilizer and Lime. |

While the word "fertilizer" does not appear in all of the above titles, none is included which does not discuss the use of fertilizer.

## CONFORMITY TO GUARANTEE

The chemical analyses reported in this bulletin were made by the methods adopted by the Association of Official Agricultural Chemists. The following list indicates the number of samples equaling or failing to meet guarantee:

| | |
|---|---|
| Number of samples analyzed | 169 |
| Equaling or exceeding all guarantees | 96 |
| Deficient in nitrogen only (11 subject to penalty) | 41 |
| Deficient in phosphoric acid only (3 subject to penalty) | 8 |
| Deficient in potash only (8 subject to penalty) | 13 |
| Deficient in nitrogen and phosphoric acid (1 subject to penalty in nitrogen) | 1 |
| Deficient in nitrogen and potash (1 subject to penalty in potash) | 3 |
| Deficient in phosphoric acid and potash (1 subject to penalty in both) (1 subject to penalty in potash) | 3 |
| Deficient in magnesium oxide | 1 |
| Deficient in magnesium oxide and nitrogen (1 subject to penalty in MgO) (1 subject to penalty in both) | 2 |
| Deficient in magnesium oxide and phosphoric acid (subject to penalty in MgO) | 1 |

Fifty samples were guaranteed to contain magnesium oxide. Of these eighteen guaranteed in terms of water soluble magnesium oxide. All magnesium oxide guarantees were met with five exceptions. Eight samples were analyzed for boron and all met the guarantee.

Penalties were assessed on 29 different lots of fertilizers representing 12 grades. Four grades, 0-15-30, 8-16-16, 15-10-10- and 10-10-10 were involved in 19 of the lots penalized. The others were scattering, one or two only in a particular grade. The penalty clause was invoked in twelve cases for nitrogen, four cases for phosphoric acid, eleven cases for potash and in four cases for magnesium oxide. These cases are indicated in the table of analyses by underline of the result found. The manufacturers are listed alphabetically and the brand names by formula and alphabetically under the name of the manufacturer.

There are far too many small deficiencies as shown by the fact that only 96 out of 169 samples met all guarantees. This problem is of serious concern and considerable cooperative work is underway to solve the problem. Fertilizers are largely mixtures of chemicals. Segregation of these materials in the bag is difficult to prevent. Modern methods of fertilizer manufacture are doing much to process the fertilizer in such a way that segregation will be avoided. The solution of this problem is difficult. To obtain a truly representative sample of a fertilizer mixture requires careful work. The chemist can accurately

determine the nitrogen, phosphoric acid, and potash content of the sample sent to the laboratory. If this sample does not correctly represent the larger lot, the analytical work is of no use. The obligation of the fertilizer control program is to see that the manufacturer is supplying the guaranteed amount of plant food to the consumer. For this reason, the sample must be drawn and analyzed very carefully so that injustice will not be done to either the consumer or manufacturer.

## COMMERCIAL VALUE OF FERTILIZERS

Section 439:10 of the New Hampshire Fertilizer Law, effective January 1, 1960, states, "For the purpose of determining the commercial values to be applied under the provisions of Section 7., the Commissioner shall determine and publish annually, the values per pound of nitrogen, phosphoric acid and potash in commercial fertilizers in this State. The values so determined and published shall be used in determining and assessing penalties."

After consulting the fertilizer manufacturers selling the major tonnage of fertilizer in New Hampshire, the Commissioner established and the Agricultural Advisory Board approved on June 1, 1959, the following commercial values per pound of nitrogen, phosphoric acid and potash:

$3.00 per Unit or 15 cents per pound of Nitrogen*
$2.00 per Unit or 10 cents per pound of Phosphoric Acid*
$1.20 per Unit or 6 cents per pound of Potash*
$1.25 per Unit or 6 cents per pound of Magnesium Oxide--(1/2 of 1% Tolerance)

*see page 2 or a copy of the law for tolerances

June 1, 1959
The New Hampshire Department of Agriculture
Concord, New Hampshire

| | Sample Drawn In | Nitrogen (N) | | Phosphoric Acid ($P_2O_5$) | | | | Potash ($K_2O$) | | Magnesium Oxide (MgO) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | | Available | | | | | |
| | | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| **Agricultural Products Co. W. Kingston, R.I.** | | | | | | | | | | | |
| * APCO Blue Ribbon 5-10-5 | Manchester | 5.00 | 6.10 | ..... | 10.90 | 10.00 | 10.34 | 5.00 | 5.94 | ..... | ..... |
| * APCO Ground Bone Meal | Manchester | 2.25 | 2.42 | 20.00 | 27.00 | ..... | ..... | ..... | ..... | ..... | ..... |
| * APCO Lawn & Garden Fertilizer 5-10-5 | Manchester | 5.00 | 5.56 | ..... | 10.72 | 10.00 | 10.23 | 5.00 | 5.51 | ..... | ..... |
| (a)* Meadow Brand Sheep Manure, Wool Combings & Inert Matter | Lisbon | 1.40 | 1.40 | 0.35 | 1.45 | ..... | ..... | 2.00 | 2.95 | ..... | ..... |
| **Allied Chemical & Dye Corp. Hopewell, Virginia** | | | | | | | | | | | |
| (F) Arcadia Urea 45 Fertilizer Compound Pelleted | Manchester | 45.00 | 45.40 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| (F) Arcadian American Nitrate of Soda 16% | Londonderry | 16.00 | 16.10 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| (F) Arcadian Ammonium Nitrate Fertilizer 33.5% | Concord | 33.50 | 33.60 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| **American Agricultural Chemical Co. N. Weymouth, Mass.** | | | | | | | | | | | |
| (F) AA Fertilizer 0-15-30 | Claremont | ..... | ..... | ..... | 13.85 | 15.00 | 13.62 | 30.00 | 22.32 | ..... | ..... |
| (F) AA Fertilizer 5-10-10 | Claremont | 5.00 | 5.06 | ..... | 11.22 | 10.00 | 10.92 | 10.00 | 10.60 | 2.00 | 3.07 |
| AA Fertilizer 8-16-16 | Lancaster | 8.00 | 7.34 | ..... | 16.14 | 16.00 | 16.01 | 16.00 | 16.12 | ..... | ..... |
| AA Fertilizer 8-16-16 | W.Stewartstown | 8.00 | 7.63 | ..... | 16.16 | 16.00 | 16.04 | 16.00 | 16.24 | ..... | ..... |
| (F) AA Fertilizer 8-16-16 | Claremont | 8.00 | 7.52 | ..... | 16.32 | 16.00 | 16.08 | 16.00 | 16.11 | ..... | ..... |
| * AA Fertilizer 10-6-4 | Portsmouth | 10.00 | 10.01 | ..... | 6.60 | 6.00 | 6.46 | 4.00 | 4.37 | ..... | ..... |
| (F) AA Fertilizer 10-10-10 | Claremont | 10.00 | 9.71 | ..... | 10.73 | 10.00 | 10.50 | 10.00 | 11.02 | ..... | ..... |
| (F)* AA Fertilizer 10-10-10 | Claremont | 10.00 | 9.72 | ..... | 10.80 | 10.00 | 10.76 | 10.00 | 10.60 | 1.00 | 0.18 |
| AA Plant Food 5-10-5 | Lebanon | 5.00 | 5.00 | ..... | 10.36 | 10.00 | 10.32 | 5.00 | 5.72 | ..... | ..... |
| Agrico 10-6-4 for Turf | Portsmouth | 10.00 | 10.33 | ..... | 6.92 | 6.00 | 6.76 | 4.00 | 4.62 | ..... | ..... |
| Agrico for Gardens 5-10-5 | Lebanon | 5.00 | 5.03 | ..... | 10.34 | 10.00 | 10.08 | 5.00 | 5.72 | ..... | ..... |
| Agrico for Lawn, Trees & Shrubs 6-10-4 | Portsmouth | 6.00 | 6.01 | ..... | 10.52 | 10.00 | 10.46 | 4.00 | 4.70 | ..... | ..... |
| Agrico for New England 5-8-7 | Lancaster | 5.00 | 5.02 | ..... | 8.24 | 8.00 | 8.16 | 7.00 | 7.29 | ..... | ..... |
| Agrico for New England 5-8-7 | Portsmouth | 5.00 | 5.01 | ..... | 8.52 | 8.00 | 8.44 | 7.00 | 7.53 | ..... | ..... |
| Agrico for Potatoes 5-10-10 | Lancaster | 5.00 | 4.88 | ..... | 10.56 | 10.00 | 10.18 | 10.00 | 9.83 | 2.00 | 2.35 |
| Agrico for Potatoes 5-10-10-2 | Portsmouth | 5.00 | 5.37 | ..... | 10.14 | 10.00 | 10.01 | 10.00 | 10.29 | 2.00 | 2.27 |
| Agrico for Top Dressing 7-7-7 | Portsmouth | 7.00 | 6.58 | ..... | 7.05 | 7.00 | 7.02 | 7.00 | 7.29 | ..... | ..... |
| Agrinite | Lebanon | 7.00 | 7.24 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| (F) Agri-Phos 20% Gran. Super | Claremont | ..... | ..... | ..... | 20.32 | 20.00 | 20.26 | ..... | ..... | ..... | ..... |
| (b) Dried Sheep Manure and Inert Matter | Manchester | 1.25 | 1.65 | 1.00 | 1.52 | ..... | ..... | 2.00 | 2.23 | ..... | ..... |

(F) Sampled at a Farm
(a) Acid Insoluble Ash - 45.88
(b) Acid Insoluble Ash - 28.97
* Not Registered when Sampled

| | Sample Drawn In | Nitrogen (N) | | Phosphoric Acid ($P_2O_5$) Total | | Phosphoric Acid ($P_2O_5$) Available | | Potash ($K_2O$) | | Magnesium Oxide (MgO) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| American Cyanamid Co. New York, N.Y. | | | | | | | | | | | |
| (F) Aeroprills--Ammonium Nitrate 33.5% | Gerrish | 33.50 | 33.52 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| (F) Aeroprills Ammonium Nitrate 33.5% | Brentwood | 33.50 | 33.74 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| (F) Aero Urea Prilled High Nitrogen Fertilizer 45% | Brentwood | 45.00 | 45.17 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Armour & Co. Carteret, N.J. | | | | | | | | | | | |
| Armour Big Crop Fertilizer 5-8-7 | Keene | 5.00 | 4.75 | ..... | 8.84 | 8.00 | 8.49 | 7.00 | 8.10 | ..... | ..... |
| Armour Big Crop Fertilizer 7-7-7 | Keene | 7.00 | 6.39 | ..... | 9.50 | 7.00 | 9.16 | 7.00 | 7.37 | ..... | ..... |
| Armour Big Crop Fertilizer 8-16-16 | Keene | 8.00 | 7.70 | ..... | 16.76 | 16.00 | 16.61 | 16.00 | 16.01 | ..... | ..... |
| (c) Armour Cattle Manure | Keene | 2.00 | 2.16 | 1.00 | 1.23 | ..... | ..... | 2.00 | 2.67 | ..... | ..... |
| * Armour Nitrate of Soda 16% | Nashua | 16.00 | 16.04 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Armour Organic Plant Food 5-5-0 | Keene | 5.00 | 5.34 | ..... | 6.40 | 5.00 | 5.98 | ..... | ..... | ..... | ..... |
| (d) Armour Pulverized Sheep Manure and Inert Matter | Keene | 1.25 | 1.25 | 1.00 | 1.50 | ..... | ..... | 2.00 | 3.86 | ..... | ..... |
| Armour's Steamed Bone Meal | Keene | 2.30 | 2.35 | 23.00 | 24.55 | ..... | ..... | ..... | ..... | ..... | ..... |
| * Armour Vertagreen All Soluble Plant Starter 10-50-8 | Nashua | 10.00 | 9.88 | ..... | 50.20 | 50.00 | 50.20 | 8.00 | 9.63 | ..... | ..... |
| Vertagreen Complete Plant Food 5-10-5 | Keene | 5.00 | 4.81 | ..... | 11.20 | 10.00 | 10.45 | 5.00 | 5.75 | ..... | ..... |
| Vertagreen for Turf & Trees 10-6-4 | Keene | 10.00 | 10.27 | ..... | 6.92 | 6.00 | 6.46 | 4.00 | 4.94 | ..... | ..... |
| * Vertagreen Turf Food with Chlordane 10-6-4 | Keene | 10.00 | 10.01 | ..... | 7.56 | 6.00 | 7.12 | 4.00 | 4.54 | ..... | ..... |
| Vertagreen Turf Maker 8-6-2 | Keene | 8.00 | 8.32 | ..... | 6.90 | 6.00 | 6.01 | 2.00 | 2.06 | ..... | ..... |
| Joseph Breck & Sons Boston, Mass. | | | | | | | | | | | |
| Breck's Bone Meal 2.5-20-0 | Nashua | 2.50 | 2.09 | 20.00 | 28.25 | ..... | ..... | ..... | ..... | ..... | ..... |
| (e) Breck's Cow Manure 2-1-1 | Nashua | 2.00 | 2.61 | 1.00 | 4.98 | ..... | ..... | 1.00 | 2.85 | ..... | ..... |
| Breck's Greenite 5-4-0 | Nashua | 5.00 | 5.14 | ..... | 6.12 | 4.00 | 5.82 | ..... | ..... | ..... | ..... |

(F) Sampled at a Farm
(c) Acid Insoluble Ash - 25.64
(d) Acid Insoluble Ash - 6.74
(e) Acid Insoluble Ash - 5.68
* Not Registered when Sampled

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Buell Fertilizer Co.** | | | | | | | | | | | |
| **Exeter, N.H.** | | | | | | | | | | | |
| (f)* Buell Peat Poultry Manure | Manchester | 3.00 | 3.41 | 3.00 | 5.00 | ..... | ..... | 1.50 | 3.12 | ..... | ..... |
| **Consolidated Rendering Co.** | | | | | | | | | | | |
| **Boston, Mass.** | | | | | | | | | | | |
| (F) Corenco Fertilizer 0-15-30 | Gerrish | ..... | ..... | ..... | 15.27 | 15.00 | 15.25 | 30.00 | 30.02 | ..... | ..... |
| (F) Corenco Fertilizer 0-15-30 | Manchester | ..... | ..... | ..... | 15.54 | 15.00 | 15.40 | 30.00 | 28.33 | ..... | ..... |
| Corenco Fertilizer 5-8-7 | Colebrook | 5.00 | 5.72 | ..... | 9.22 | 8.00 | 9.04 | 7.00 | 7.53 | ..... | ..... |
| ≠ Corenco Fertilizer 5-10-10-2 | Berlin | 5.00 | 5.01 | ..... | 10.14 | 10.00 | 10.03 | 10.00 | 10.45 | 2.00 | 2.24 |
| Corenco Fertilizer 5-10-10-2 | Colebrook | 5.00 | 5.35 | ..... | 10.64 | 10.00 | 10.58 | 10.00 | 10.53 | 2.00 | 2.72 |
| Corenco Fertilizer 8-16-16 | Colebrook | 8.00 | 8.07 | ..... | 16.19 | 16.00 | 15.62 | 16.00 | 15.45 | ..... | ..... |
| (F) Corenco Fertilizer 8-16-16 | Westmoreland | 8.00 | 7.90 | ..... | 18.05 | 16.00 | 17.58 | 16.00 | 14.50 | ..... | ..... |
| Corenco Fertilizer 10-10-10 | Berlin | 10.00 | 10.01 | ..... | 10.16 | 10.00 | 10.01 | 10.00 | 10.85 | ..... | ..... |
| (F)* [1]Corenco Fertilizer 10-10-10-2 | Wilton | 10.00 | 7.85 | ..... | 15.12 | 10.00 | 14.89 | 10.00 | 14.88 | 2.00 | 1.46 |
| (g) Corenco Sheep Manure and Inert Matter | Berlin | 1.25 | 1.40 | 1.00 | 1.45 | ..... | ..... | 2.00 | 2.75 | ..... | ..... |
| (F) Corenco Superphosphate 20% | Gerrish | ..... | ..... | ..... | 20.65 | 20.00 | 20.63 | ..... | ..... | ..... | ..... |
| Corenco Turf Green 8-6-4 | Berlin | 8.00 | 8.03 | ..... | 6.54 | 6.00 | 6.38 | 4.00 | 5.35 | ..... | ..... |
| (F)* Triple Superphosphate | Durham | ..... | ..... | ..... | 46.60 | 45.50 | 46.06 | ..... | ..... | ..... | ..... |
| **Davison Chemical Co.** | | | | | | | | | | | |
| **Baltimore 3, Md.** | | | | | | | | | | | |
| * Davco 3-G Granular Fertilizer 10-10-10 | W.Lebanon | 10.00 | 10.42 | ..... | 10.04 | 10.00 | 10.01 | 10.00 | 10.93 | ..... | ..... |
| **Eastern States Farmers Exchange, Inc.** | | | | | | | | | | | |
| **W. Springfield, Mass.** | | | | | | | | | | | |
| [2]Eastern States Fertilizer 0-15-30 W/B | N.Haverhill | ..... | ..... | ..... | 14.12 | 15.00 | 13.98 | 30.00 | 31.34 | ..... | ..... |
| (F) [3]Eastern States Fertilizer 0-15-30 W/B | Warner | ..... | ..... | ..... | 15.80 | 15.00 | 15.64 | 30.00 | 30.05 | ..... | ..... |
| (F) Eastern States Fertilizer 0-25-25 | Lebanon | ..... | ..... | ..... | 36.10 | 25.00 | 35.75 | 25.00 | 13.51 | ..... | ..... |
| ≠ Eastern States Fertilizer 8-16-16 | Manchester | 8.00 | 8.15 | ..... | 16.28 | 16.00 | 16.02 | 16.00 | 16.32 | 1.00 | 1.06 |
| (F)≠ Eastern States Fertilizer 8-16-16 | Henniker | 8.00 | 8.32 | ..... | 15.60 | 16.00 | 15.54 | 16.00 | 16.81 | 1.00 | 1.01 |
| (F)≠ Eastern States Fertilizer 8-16-16 | Woodsville | 8.00 | 8.01 | ..... | 16.38 | 16.00 | 16.25 | 16.00 | 16.75 | 1.00 | 1.17 |
| (F)≠ Eastern States Fertilizer 8-16-16 | Lebanon | 8.00 | 8.01 | ..... | 16.04 | 16.00 | 16.00 | 16.00 | 16.75 | 1.00 | 1.10 |
| (F)≠ Eastern States Fertilizer 8-16-16 | Lebanon | 8.00 | 8.15 | ..... | 16.56 | 16.00 | 16.16 | 16.00 | 15.28 | 1.00 | 1.01 |

(f) Acid Insoluble Ash - 0.64
(F) Sampled at a Farm
≠ Water Soluble MgO
[1]Borax Guaranteed 40 lb.; Borax Found 58 lb.

(g) Acid Insoluble Ash - 30.74
[2]Boron Guaranteed 0.2%; Boron Found 0.55%
[3]Boron Guaranteed 0.2%; Boron Found 0.50%
* Not Registered when Sampled

| | | Sample Drawn In | Nitrogen (N) | | Phosphoric Acid ($P_2O_5$) Total | | Phosphoric Acid ($P_2O_5$) Available | | Potash ($K_2O$) | | Magnesium Oxide (MgO) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| | Eastern States Farmers Exchange, Inc. W. Springfield, Mass. (continued) | | | | | | | | | | | |
| ≠ | Eastern States Fertilizer 8-16-16 . . . . | N.Haverhill | 8.00 | 8.06 | ..... | 16.82 | 16.00 | 16.74 | 16.00 | 16.40 | 1.00 | 1.34 |
| (F)≠ | Eastern States Fertilizer 8-16-16 . . . . | Warner | 8.00 | 8.02 | ..... | 15.46 | 16.00 | 16.34 | 16.00 | 14.80 | 1.00 | 1.43 |
| (F) | Eastern States Fertilizer 10-10-10 . . . . | Lebanon | 10.00 | 9.85 | ..... | 10.29 | 10.00 | 10.01 | 10.00 | 11.44 | 1.00 | 1.53 |
| (F) | Eastern States Fertilizer 10-10-10 . . . . | N.Haverhill | 10.00 | 9.66 | ..... | 10.46 | 10.00 | 10.33 | 10.00 | 11.02 | 1.00 | 2.29 |
| (F) | Eastern States Fertilizer 10-10-10 . . . . | Henniker | 10.00 | 9.52 | ..... | 10.62 | 10.00 | 10.56 | 10.00 | 11.34 | 1.00 | 1.59 |
| (F) | Eastern States Fertilizer 10-10-10 . . . . | Warner | 10.00 | 9.53 | ..... | 10.72 | 10.00 | 10.64 | 10.00 | 10.94 | 1.00 | 1.73 |
| (F)≠ | Eastern States Fertilizer 10-10-10- LC . . | Lebanon | 10.00 | 9.82 | ..... | 10.88 | 10.00 | 10.84 | 10.00 | 11.10 | 2.00 | 2.24 |
| (F) | Eastern States Fertilizer 15-10-10 . . . . | Lebanon | 15.00 | 13.47 | ..... | 10.42 | 10.00 | 10.31 | 10.00 | 11.23 | ..... | ..... |
| (F) | Eastern States Fertilizer 15-10-10 . . . . | Lebanon | 15.00 | 13.20 | ..... | 12.23 | 10.00 | 12.08 | 10.00 | 12.30 | ..... | ..... |
| | Eastern States Fertilizer 15-10-10 . . . . | Manchester | 15.00 | 14.44 | ..... | 10.76 | 10.00 | 10.67 | 10.00 | 11.48 | ..... | ..... |
| | Eastern States Greenlawn 10-5-5 . . . . . | Manchester | 10.00 | 9.56 | ..... | 5.60 | 5.00 | 5.34 | 5.00 | 5.94 | 2.00 | 8.97 |
| (F) | Eastern States Pulverized Superphosphate 20% . . . . . | Durham | ..... | ..... | ..... | 21.00 | 20.00 | 20.88 | ..... | ..... | ..... | ..... |
| | Faesy & Besthoff, Inc. New York, N.Y. | | | | | | | | | | | |
| * | F & B 15-30-15 Starter Grower . . . . . | Manchester | 15.00 | 15.00 | ..... | 31.05 | 30.00 | 30.31 | 15.00 | 15.94 | ..... | ..... |
| | Fiestar, Inc. New York 22, N.Y. | | | | | | | | | | | |
| | Fiestar 2-2-0 . . . . . | Keene | 2.00 | 2.25 | ..... | 2.78 | 2.00 | 2.33 | ..... | ..... | ..... | ..... |
| | Hubbard Hall Chemical Co. Waterbury, Conn. | | | | | | | | | | | |
| | HH Bone Meal 2-23-0 . . . . . | W.Lebanon | 2.00 | 2.56 | 23.00 | 26.65 | ..... | ..... | ..... | ..... | ..... | ..... |
| * | HH Cottonseed Meal 6-0-0 . . . . . | Nashua | 6.00 | 6.42 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| (h) | HH Cow Manure 2-1-1 . . . . . | W.Lebanon | 2.00 | 1.25 | 1.00 | 0.61 | ..... | ..... | 1.00 | 4.41 | ..... | ..... |
| | HH Plant Food 5-10-5 . . . . . | Manchester | 5.00 | 5.23 | ..... | 10.78 | 10.00 | 10.43 | 5.00 | 5.51 | ..... | ..... |

(F) Sampled at a Farm
≠ Water Soluble MgO
(h) Acid Insoluble Ash - 43.95%
* Not Registered when Sampled

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HH Rose Food 7-10-5 . . . . . | W.Lebanon | 7.00 | 7.24 | ..... | 12.52 | 10.00 | 11.47 | 5.00 | 5.35 | ..... | ..... |
| (i) | HH Sheep Manure and Inert Matter . . . . . | W.Lebanon | 1.25 | 1.40 | 1.00 | 0.64 | ..... | ..... | 1.00 | 4.33 | ..... | ..... |
| * | HH Superphosphate 20% . . . . . | Nashua | ..... | ..... | ..... | 20.80 | 20.00 | 20.22 | ..... | ..... | ..... | ..... |
| | Liberty Fertilizer 7-7-7 . . . . . | Hooksett | 7.00 | 7.03 | ..... | ..... | 7.00 | 7.76 | 7.00 | 7.42 | ..... | ..... |
| | Liberty Fertilizer 7-7-7 . . . . . | Thornton's Ferry | 7.00 | 7.02 | ..... | ..... | 7.00 | 7.64 | 7.00 | 7.36 | ..... | ..... |
| (F) | Liberty Fertilizer 5-10-10 . . . . . | Hollis | 5.00 | 4.76 | ..... | 10.60 | 10.00 | 10.53 | 10.00 | 11.10 | ..... | ..... |
| | **International Minerals & Chemical Corp. Woburn, Mass.** | | | | | | | | | | | |
| ≠ | Fertilis Plant Food 8-6-2-1 . . . . . | Manchester | 8.00 | 8.01 | ..... | 6.80 | 6.00 | 6.68 | 2.00 | 2.23 | 1.00 | 1.78 |
| (F)* | International Fertilizer 0-15-30 . . . . . | Durham | ..... | ..... | ..... | 15.22 | 15.00 | 15.04 | 30.00 | 31.02 | ..... | ..... |
| | International Fertilizer 0-15-30 . . . . . | Colebrook | ..... | ..... | ..... | 14.80 | 15.00 | 14.56 | 30.00 | 28.24 | ..... | ..... |
| *[4] | International Fertilizer 0-15-30 . . . . . | Lancaster | ..... | ..... | ..... | 14.89 | 15.00 | 14.56 | 30.00 | 30.04 | ..... | ..... |
| (F) | International Fertilizer 0-20-20 . . . . . | Laconia | ..... | ..... | ..... | 23.50 | 20.00 | 23.32 | 20.00 | 17.22 | ..... | ..... |
| | International Fertilizer 5-8-7-1 . . . . . | Meredith | 5.00 | 5.01 | ..... | 8.80 | 8.00 | 8.56 | 7.00 | 7.01 | 1.00 | 1.50 |
| * | International Fertilizer 5-10-5-1 . . . . . | W.Lebanon | 5.00 | 5.01 | ..... | 10.26 | 10.00 | 9.63 | 5.00 | 5.26 | 1.00 | 1.44 |
| (F)≠ | International Fertilizer 5-10-10-2 . . . . | Concord | 5.00 | 5.14 | ..... | 10.03 | 10.00 | 9.76 | 10.00 | 11.24 | 2.00 | 0.80 |
| (F) | International Fertilizer 5-10-10-2 . . . . | Laconia | 5.00 | 5.11 | ..... | 10.56 | 10.00 | 10.36 | 10.00 | 10.47 | 2.00 | 2.57 |
| | International Fertilizer 5-10-10-2 . . . . | N.Haverhill | 5.00 | 5.48 | ..... | 10.64 | 10.00 | 10.54 | 10.00 | 10.65 | 2.00 | 2.29 |
| (F)≠ | International Fertilizer 5-10-10-2 . . . . | Concord | 5.00 | 5.11 | ..... | 10.38 | 10.00 | 10.30 | 10.00 | 10.39 | 2.00 | 0.75 |
| ≠* | International Fertilizer 5-10-10-2 Potato. | W.Lebanon | 5.00 | 5.02 | ..... | 10.56 | 10.00 | 10.01 | 10.00 | 10.77 | 2.00 | 2.09 |
| * | International Fertilizer 7-7-7-1 . . . . . | Colebrook | 7.00 | 7.01 | ..... | 7.20 | 7.00 | 7.15 | 7.00 | 7.53 | 1.00 | 1.84 |
| 6 (F) | International Fertilizer 8-16-16 . . . . . | Durham | 8.00 | 8.14 | ..... | 16.30 | 16.00 | 16.07 | 16.00 | 15.83 | ..... | ..... |
| * | International Fertilizer 8-16-16 . . . . . | Meredith | 8.00 | 8.08 | ..... | 16.80 | 16.00 | 16.66 | 16.00 | 17.18 | ..... | ..... |
| | International Fertilizer 8-16-16 . . . . . | N.Haverhill | 8.00 | 8.13 | ..... | 16.22 | 16.00 | 16.04 | 16.00 | 16.36 | ..... | ..... |
| (F) | International Fertilizer 10-10-10-1 . . . | Concord | 10.00 | 9.70 | ..... | 10.44 | 10.00 | 10.40 | 10.00 | 10.68 | 1.00 | 1.05 |
| | International Fertilizer 10-10-10-1 . . . | N.Haverhill | 10.00 | 10.41 | ..... | 10.40 | 10.00 | 10.25 | 10.00 | 10.77 | 1.00 | 1.54 |
| (F) | International Fertilizer 10-10-10-1 . . . | Concord | 10.00 | 10.01 | ..... | 10.23 | 10.00 | 10.02 | 10.00 | 10.39 | 1.00 | 1.38 |
| (F) | International Fertilizer 10-10-10-1 . . . | Durham | 10.00 | 10.49 | ..... | 10.10 | 10.00 | 10.03 | 10.00 | 10.93 | 1.00 | 1.55 |
| (F) | International Fertilizer 10-10-10-1 . . . | Contoocook | 10.00 | 9.77 | ..... | 10.34 | 10.00 | 10.27 | 10.00 | 11.18 | 1.00 | 1.20 |
| (F) | International Fertilizer 10-10-10-1 . . . | Ossipee | 10.00 | 9.71 | ..... | 10.32 | 10.00 | 10.28 | 10.00 | 10.73 | 1.00 | 1.01 |
| (F) | International Fertilizer 10-10-10-1 . . . | Glencliff | 10.00 | 9.56 | ..... | 10.32 | 10.00 | 10.19 | 10.00 | 11.09 | 1.00 | 1.58 |
| * | International Fertilizer 15-10-10 . . . . | W.Lebanon | 15.00 | 14.18 | ..... | 10.22 | 10.00 | 10.14 | 10.00 | 10.16 | ..... | ..... |
| (F) | International Fertilizer 20% Superphosphate | Manchester | ..... | ..... | ..... | 20.30 | 20.00 | 20.20 | ..... | ..... | ..... | ..... |
| | International Mello Green 5-5-0 . . . . . | Manchester | 5.00 | 4.74 | ..... | 8.36 | 5.00 | 7.80 | ..... | ..... | ..... | ..... |
| (F) | International Rainbow Plant Food | | | | | | | | | | | |
| ≠ *[5] | 10-10-10-3 . . . . . | Hampton Falls | 10.00 | 9.67 | ..... | 10.76 | 10.00 | 10.41 | 10.00 | 10.38 | 3.00 | 5.04 |
| (F) | International 20% Superphosphate . . . . . | Concord | ..... | ..... | ..... | 20.25 | 20.00 | 20.19 | ..... | ..... | ..... | ..... |

(F) Sampled at a Farm
≠ Water Soluble MgO
* Not Registered when Sampled
(i) Acid Insoluble Ash - 4.74%

[4] Boron Guaranteed 0.22; Boron Found 0.34%
[5] Borax Guaranteed 40 lb.; Borax Found 46 lb.

| | | Sample Drawn In | Nitrogen (N) | | Phosphoric Acid ($P_2O_5$) Total | | Phosphoric Acid ($P_2O_5$) Available | | Potash ($K_2O$) | | Magnesium Oxide (MgO) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| | International Minerals & Chemical Corp. Woburn, Mass. (continued) | | | | | | | | | | | |
| | 60 % Muriate of Potash . . . . . | W.Lebanon | ..... | ..... | ..... | ..... | ..... | ..... | 60.00 | 60.48 | ..... | ..... |
| ≠ | Rainbow Plant Food 6-12-12-2 . . . . . | Colebrook | 6.00 | 6.04 | ..... | 12.60 | 12.00 | 12.44 | 12.00 | 11.66 | 2.00 | 2.23 |
| (F)≠ | Rainbow Plant Food 8-12-12-2 . . . . . | Colebrook | 8.00 | 7.71 | ..... | 12.72 | 12.00 | 12.30 | 12.00 | 12.56 | 2.00 | 2.35 |
| (F)≠* | [6]Rainbow Plant Food 10-10-10-5 . . . . . | Londonderry | 10.00 | 9.55 | ..... | 10.82 | 10.00 | 10.69 | 10.00 | 10.12 | 5.00 | 5.03 |
| (F)≠* | Rainbow Plant Food 10-10-10-5 . . . . . | Derry | 10.00 | 9.52 | ..... | 10.74 | 10.00 | 10.63 | 10.00 | 10.37 | 5.00 | 4.70 |
| (F)≠* | Rainbow Plant Food 10-10-10-5 . . . . . | Wilton | 10.00 | 9.56 | ..... | 10.60 | 10.00 | 10.50 | 10.00 | 10.32 | 5.00 | 5.29 |
| | Kelley-Western Seed Div. Salt Lake City, Utah | | | | | | | | | | | |
| | Pax Plant Food 7-0-0 . . . . . | Nashua | 7.00 | 7.17 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | Lawn Tex Corp. Chicago, Ill. | | | | | | | | | | | |
| | Organi Green 5-5-0 . . . . . | Manchester | 5.00 | 4.77 | ..... | 6.14 | 5.00 | 5.82 | ..... | ..... | ..... | ..... |
| | Lee Patten Seed Co. Jersey City 3, N.J. | | | | | | | | | | | |
| | Patco's Lawn Food 9-8-3 . . . . . | Nashua | 9.00 | 8.80 | ..... | 8.42 | 8.00 | 8.33 | 3.00 | 4.70 | ..... | ..... |
| | Merrimack Farmers Exchange, Inc. Concord, N.H. | | | | | | | | | | | |
| (F) | Merrimack Fertilizer 0-15-30 . . . . . | Concord | ..... | ..... | ..... | 14.60 | 15.00 | 14.30 | 30.00 | 30.32 | ..... | ..... |
| (F) | Merrimack Fertilizer 0-15-30 . . . . . | Bath | ..... | ..... | ..... | 15.32 | 15.00 | 15.24 | 30.00 | 30.21 | ..... | ..... |
| (F) | Merrimack Fertilizer 0-15-30 . . . . . | Gerrish | ..... | ..... | ..... | 15.32 | 15.00 | 15.21 | 30.00 | 30.38 | ..... | ..... |
| (F) | Merrimack Fertilizer 0-15-30 . . . . . | Concord | ..... | ..... | ..... | 15.46 | 15.00 | 15.38 | 30.00 | 30.78 | ..... | ..... |
| (F) | Merrimack Fertilizer 0-15-30 . . . . . | Durham | ..... | ..... | ..... | 16.44 | 15.00 | 16.29 | 30.00 | 30.05 | ..... | ..... |
| (F) | [8]Merrimack Fertilizer with Borax 0-15-30 . . | Brentwood | ..... | ..... | ..... | 16.40 | 15.00 | 16.16 | 30.00 | 27.28 | ..... | ..... |
| (F) | Merrimack Fertilizer 0-20-20 . . . . . | Durham | ..... | ..... | ..... | 21.50 | 20.00 | 21.44 | 20.00 | 21.88 | ..... | ..... |

(F) Sampled at a Farm
≠ Water Soluble MgO
* Not Registered when Sampled

[6]Borax Guaranteed ---; Borax Found 2.5%
[7]Borax Guaranteed ---; Borax Found 2.0%
[8]Borax Guaranteed ---; Borax Found 2.2%

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (F)* | Merrimack Fertilizer 5-10-10-2 . . . . . | Brentwood | 5.00 | 5.62 | ..... | 11.82 | 10.00 | 11.79 | 10.00 | 9.57 | 2.00 | 2.11 |
| (F) | Merrimack Fertilizer 8-16-16 . . . . . | Laconia | 8.00 | 8.24 | ..... | 16.20 | 16.00 | 16.04 | 16.00 | 17.18 | ..... | ..... |
| (F) | Merrimack Fertilizer 8-16-16 . . . . . | Bath | 8.00 | 7.71 | ..... | 16.24 | 16.00 | 16.11 | 16.00 | 16.54 | ..... | ..... |
| (F) | Merrimack Fertilizer 8-16-16 . . . . . | Henniker | 8.00 | 7.78 | ..... | 16.88 | 16.00 | 16.54 | 16.00 | 16.93 | ..... | ..... |
| (F) | Merrimack Fertilizer 8-16-16 . . . . . | Gerrish | 8.00 | 7.36 | ..... | 16.32 | 16.00 | 16.07 | 16.00 | 16.20 | ..... | ..... |
| (F) | Merrimack Fertilizer 8-16-16 . . . . . | Manchester | 8.00 | 8.07 | ..... | 17.49 | 16.00 | 17.12 | 16.00 | 15.12 | ..... | ..... |
| (F) | Merrimack Fertilizer 10-10-10 . . . . . | Brentwood | 10.00 | 10.05 | ..... | 10.34 | 10.00 | 10.26 | 10.00 | 10.53 | ..... | ..... |
| (F) | Merrimack Turf Green 8-6-4 . . . . . | Gerrish | 8.00 | 8.02 | ..... | 6.48 | 6.00 | 6.26 | 4.00 | 5.26 | ..... | ..... |
| | **Old Fox Agricultural Sales** | | | | | | | | | | | |
| | **E. Providence, R.I.** | | | | | | | | | | | |
| | Old Fox Fertilizer 0-20-0 . . . . . | Lisbon | ..... | ..... | ..... | 21.40 | 20.00 | 21.02 | ..... | ..... | ..... | ..... |
| | Old Fox Fertilizer 5-10-10 . . . . . | Lisbon | 5.00 | 5.01 | ..... | 11.36 | 10.00 | 10.88 | 10.00 | 10.77 | ..... | ..... |
| | Old Fox Fertilizer 5-10-10-2 . . . . . | Colebrook | 5.00 | 5.48 | ..... | 10.98 | 10.00 | 10.86 | 10.00 | 11.34 | 2.00 | 2.60 |
| (F) | Old Fox Fertilizer 8-12-12-2 . . . . . | Laconia | 8.00 | 7.54 | ..... | 12.40 | 12.00 | 12.10 | 12.00 | 12.93 | 2.00 | 2.28 |
| (F) | Old Fox Fertilizer 8-16-16 . . . . . | Concord | 8.00 | 7.55 | ..... | 16.32 | 16.00 | 16.01 | 16.00 | 14.40 | ..... | ..... |
| (F) | Old Fox Fertilizer 8-16-16 . . . . . | Concord | 8.00 | 7.84 | ..... | 16.65 | 16.00 | 16.25 | 16.00 | 15.54 | ..... | ..... |
| | Old Fox Fertilizer 8-16-16 . . . . . | Glencliff | 8.00 | 8.01 | ..... | 16.18 | 16.00 | 16.02 | 16.00 | 15.45 | ..... | ..... |
| | Old Fox Fertilizer 10-10-10 . . . . . | Lisbon | 10.00 | 10.24 | ..... | 10.98 | 10.00 | 10.78 | 10.00 | 11.58 | ..... | ..... |
| | Old Fox Fertilizer 10-10-10 . . . . . | Colebrook | 10.00 | 9.32 | ..... | 10.30 | 10.00 | 10.02 | 10.00 | 11.50 | ..... | ..... |
| | **O. M. Scott & Sons** | | | | | | | | | | | |
| | **Marysville, Ohio** | | | | | | | | | | | |
| * | Bonus Weed & Feed . . . . . | Manchester | 25.00 | 25.19 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | Scott's New Turf Builder 20-10-5 . . . . . | Manchester | 20.00 | 20.26 | ..... | 10.16 | 10.00 | 10.01 | 5.00 | 5.30 | ..... | ..... |
| | Scott's Turf Builder 20-10-5 . . . . . | Portsmouth | 20.00 | 20.01 | ..... | 10.56 | 10.00 | 10.04 | 5.00 | 5.02 | ..... | ..... |
| | **Sagadahoc Fertilizer Works** | | | | | | | | | | | |
| | **Bowdoinham, Me.** | | | | | | | | | | | |
| | Sagadahoc Fertilizer 8-16-16-1 . . . . . | Northumberland | 8.00 | 8.01 | ..... | 16.92 | 16.00 | 16.75 | 16.00 | 16.68 | 1.00 | 1.35 |
| | Sagadahoc Fertilizer 10-10-10-1 . . . . . | Northumberland | 10.00 | 10.19 | ..... | 10.88 | 10.00 | 10.79 | 10.00 | 9.20 | 1.00 | 1.35 |
| (F) | Sagadahoc Fertilizer 8-12-12-2 . . . . . | Northumberland | 8.00 | 8.07 | ..... | 12.96 | 12.00 | 12.73 | 12.00 | 12.23 | 2.00 | 2.37 |
| (F) | Sagadahoc Fertilizer 8-12-12-2 . . . . . | Colebrook | 8.00 | 8.07 | ..... | 12.40 | 12.00 | 12.20 | 12.00 | 12.15 | 2.00 | 2.53 |
| | Sagadahoc Fertilizer 8-16-16-1 . . . . . | Colebrook | 8.00 | 7.72 | ..... | 16.60 | 16.00 | 16.22 | 16.00 | 16.04 | 1.00 | 1.49 |

(F) Sampled at a Farm
* Not Registered when Sampled

| | | Sample Drawn In | Nitrogen (N) | | Phosphoric Acid ($P_2O_5$) Total | | Phosphoric Acid ($P_2O_5$) Available | | Potash ($K_2O$) | | Magnesium Oxide (MgO) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| | Sears Roebuck & Co. Chicago, Ill. | | | | | | | | | | | |
| | Cross Country Organic Lawn Food 5-5-0 . . | Manchester | 5.00 | 5.02 | ..... | 5.58 | 5.00 | 5.19 | ..... | ..... | ..... | ..... |
| | Cross Country Plant Food 5-10-5 . . . . | Manchester | 5.00 | 5.02 | ..... | 9.71 | 10.00 | 8.96 | 5.00 | 5.72 | ..... | ..... |
| (j) | Cross Country Sheep Manure 1.5-1-2 . . . | Manchester | 1.50 | 2.42 | 1.00 | 1.04 | ..... | ..... | 2.00 | 3.81 | ..... | ..... |
| | Swift & Co. Chicago, Ill. | | | | | | | | | | | |
| * | Swift's Vigoro 6-10-4 . . . . . | Manchester | 6.00 | 6.11 | ..... | 10.16 | 10.00 | 8.81 | 4.00 | 4.66 | ..... | ..... |
| | Valley Feed & Supply Spring Valley, N.Y. | | | | | | | | | | | |
| * | Adorna 3-1-1 . . . . . | Gorham | 3.00 | 3.87 | 2.50 | 4.93 | 1.00 | 2.23 | 1.00 | 1.50 | ..... | ..... |
| | Walker-Gordon Labs., Inc. Plainsboro, N.J. | | | | | | | | | | | |
| (k) | Bovung Dehy. Cow Manure . . . . . | Manchester | 2.00 | 2.12 | 1.00 | 1.26 | ..... | ..... | 2.00 | 3.08 | ..... | ..... |
| (l) | Bovung Dehy. Cow Manure 2-1-2 . . . . . | Lancaster | 2.00 | 1.84 | 1.00 | 1.48 | ..... | ..... | 2.00 | 2.88 | ..... | ..... |



* Not Registered when Sampled.
(j) Acid Insoluble Ash - 18.02
(k) Acid Insoluble Ash - 1.15
(l) Acid Insoluble Ash - 1.33

The following information was furnished by Control Supervisor.

The following fertilizer products were unregistered with the New Hampshire Department of Agriculture at the time they were found exposed for sale. Samples were not drawn.

AGRICULTURAL PRODUCTS CO. — WEST KINGSTON, RHODE ISLAND
APCO All Purpose Plant Food 5-10-5

AMERICAN AGRICULTURAL CHEMICAL CO. — N. WEYMOUTH, MASSACHUSETTS
Sulphate of Ammonia (mislabelled)

ARMOUR FERTILIZER WORKS — CARTERET, NEW JERSEY
Armour Muriate of Potash 60%
Armour Sulphate of Ammonia 20.5%
Armour Nitrate of Soda 16%

CHICAGO STOCK YARDS — CHICAGO, ILLINOIS
Gardenure 1-1-1

SAGADAHOC FERTILIZER CO., INC. — BOWDOINHAM, MAINE
Sagadahoc Bone Meal 1.5-18-0
Sagadahoc Dehydrated Cow Manure 2-1-1
Sagadahoc Sheep Manure 2-1-1